

Elements of Weather

Standard 3 Objective 2 Indicators a, b, and c

Chapter 23: Section 1: Directed Reading Pages 575-580

CHANGING FORMS OF WATER (page 575)

- _____ 1. When liquid water absorbs energy, it changes to
a. a gas. b. a liquid. c. crystals. d. a solid.
- _____ 2. When liquid water evaporates, the water
a. releases energy into the atmosphere. b. condenses into water vapor.
c. starts to flow more rapidly. d. absorbs energy from the environment.
- _____ 3. The name for the process in which water vapor changes back into a liquid is
a. condensation. b. latent heat. c. collision. d. evaporation
- _____ 4. What happens to latent heat when ice thaws?
a. It is released. b. It is absorbed. c. It is recycled. d. It is lost.
- _____ 5. Through what process does most water enter the atmosphere?
a. evaporation b. absorption c. condensation d. release
6. Where on Earth does most evaporation take place? _____

HUMIDITY (page 577)

7. What determines the rate of evaporation?
8. What happens to the relative humidity if the temperature increases as the moisture in the air remains constant?
9. What causes dew to form?

MEASURING HUMIDITY (page 579)

10. Why do meteorologists measure humidity?

Chapter 23: Section 3: Directed Reading Pages 587-590

Section: Precipitation (page 587)

11. Any form of water that falls to Earth's surface from the clouds is called _____.
12. Name four major types of moisture that fall from the air to Earth.

In the space provided, write the letter of the definition that best matches the term or phrase.

- | | |
|---------------------|---|
| _____ 13. rain | a. precipitation consisting of ice particles |
| _____ 14. drizzle | b. solid precipitation in the form of lumps of ice |
| _____ 15. snow | c. a thick layer of ice on a surface |
| _____ 16. sleet | d. clear ice pellets formed when rain falls through a layer of freezing air |
| _____ 17. glaze ice | e. liquid precipitation |
| _____ 18. ice storm | f. rain consisting of drops smaller than 0.5 mm in diameter |
| _____ 19. hail | g. the condition which produces glaze ice |

FORMS OF PRECIPITATION (page 587)

20. What is the most common form of solid precipitation? _____

21. In what kind of clouds does hail usually form? _____

22. What process causes hail to form and fall to the ground? _____

_____ 23. What must happen in order for a cloud droplet to fall as precipitation?

- a. It must freeze.
- b. It must decrease in size.
- c. It must increase in size.
- d. It must warm up.

_____ 24. What happens in the process of coalescence?

- a. Small droplets slow down as they fall.
- b. Small droplets combine to form larger droplets.
- c. Small droplets break up into smaller droplets.
- d. Large droplets divide into smaller droplets

_____ 25. What is NOT true of freezing nuclei?

- a. They are a form of precipitation.
- b. They are suspended in the air.
- c. They are solid particles.
- d. They are similar to ice in structure.

26. What is the name of an instrument used to measure rainfall?

27. What does Doppler radar measure?

28. Name three things meteorologists can determine with Doppler radar.